

What is claimed is:

1. An array comprising a plurality of nucleic acid probes, wherein each probe in the plurality of nucleic acid probes consists essentially of one of the sequences listed in SEQ ID Nos. 1-124,031 and wherein the plurality of nucleic acid probes of the array comprises each of the sequences listed in SEQ ID NOS. 1-124,031.
2. The array of claim 1 further comprising a second plurality of nucleic acid probes, wherein each probe in the second plurality of nucleic acid probes consists essentially of the complement of one of the sequences listed in SEQ ID NOS: 1-124,031 and wherein the second plurality of nucleic acid probes comprises the complement of each of the sequences listed in SEQ ID NOS: 1-124,031.
3. The array of claim 2 further comprising a third plurality of nucleic acid probes, wherein each probe in the third plurality of nucleic acid probes consists essentially of the sequence of one of the sequences listed in SEQ ID NOS: 1-124,031 except with a mismatch at the central position.
4. The array of claim 1 wherein each probe is attached to a bead.
5. A kit for genotyping at least 1,000 of the SNPs listed in Table 1, said kit comprising: a plurality of oligonucleotides, wherein each oligonucleotide in the plurality of oligonucleotides is complementary to one allele of one of the SNPs in Table 1, 10-25 bases 5' of the SNP and 10-25 bases 3' of the SNP and wherein the kit comprises at least 1,000 different

oligonucleotides.

6. A method of genotyping at least 1000 SNPs in parallel comprising:
 - obtaining a nucleic acid sample;
 - amplifying fragments of DNA in the nucleic acid sample wherein a plurality of fragments, each comprising one SNP from the SNPs listed in Table 1 and at least 10 bases of sequence immediately 5' or 3' of the SNP, are amplified and wherein at least 1000 SNPs from Table 1 are amplified;
 - hybridizing the amplified sample to an array;
 - analyzing the hybridization pattern; and
 - determining the genotype of the sample for the at least 1000 SNPs.
7. The method of claim 6 wherein the amplified sample is labeled with a detectable label.